

# **ABSTRACT**

A photoelectric encoder includes a main scale with a grating, and a light receiving portion with an index grating and a light receiving element. A bright/dark pattern obtained  
5 at least by the grating on the main scale is detected by the light receiving portion moved relative to the main scale. A lens and/or an aperture are inserted between the main scale and the light receiving portion, and a magnification of an image is set by adjusting distances among the lens or the aperture,  
10 the main scale and the light receiving portion.